

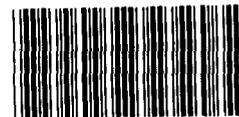
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United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

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July 17, 1992

The Honorable Daniel K. Inouye
Chairman, Subcommittee on Defense
Committee on Appropriations
United States Senate

The Honorable John P. Murtha
Chairman, Subcommittee on Defense
Committee on Appropriations
House of Representatives

During our recent review of the Advanced Cruise Missile (ACM) program,¹ we became aware of efforts by the Department of Defense to restart development of a variant of the baseline ACM. Although Congress directed the Air Force to terminate such development in November 1991, the Office of the Under Secretary of Defense, Policy (OUSD/P) began evaluating ways to restart development and thereby preserve an option to modify ACMs in the future. This letter identifies funds in the fiscal year 1993 budget no longer needed for the variant, and discusses several issues that would need to be evaluated should serious consideration be given to modifying ACMs to the variant configuration.

BACKGROUND

In 1985, the Strategic Air Command (SAC) established a requirement for a weapons system to destroy a specific set of targets for which existing systems--including ACM--were considered ineffective. In 1987, the Air Force validated the need to develop and produce 120 modified ACMs (referred to as variants) to satisfy this requirement. In fiscal year 1990, the Air Force began developing the ACM variant and has since spent about \$60 million.

The Air Force requested \$79.8 million for the ACM variant program in fiscal year 1992. However, in November 1991,

¹Strategic Missiles: ACM Program, Opportunity for Additional Savings (GAO/NSIAD-92-154, May 6, 1992).

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the Appropriations Conference Committee denied the request and directed the Air Force to terminate the program. In December 1991, the Air Force terminated the variant contract and subsequently disbanded the program office staff.

In February 1992, OUSD/P asked the Air Force to develop basic information on restarting the ACM variant program. The Air Force responded the next month with a preliminary analysis that estimated an additional cost of \$245 million and 4 years would be needed from restart to first test flight of the ACM variant. The Air Force also estimated the cost to then modify 120 ACMs would be about another \$340 million and take another 4 years.

The Air Force's original proposal to the Office of the Secretary of Defense included \$82.3 million in fiscal year 1993 for both variant development and for baseline ACM software development, depot maintenance, and other support. After the variant was terminated in November 1991, the Air Force reduced its proposal by \$47.4 million, the amount of funds directly related to the variant. However, the full \$82.3 million is requested in the President's budget.

RESULTS IN BRIEF

While we were looking into the proposal to restart the ACM variant program, Defense officials told us in early June 1992 that they were dropping the proposal to restart development of the ACM variant and that no fiscal year 1993 funds would be required. On this basis, the \$82.3 budget request should be reduced by \$47.4 million.

If restarting development of the ACM variant program is seriously considered, however, several critical issues should be addressed, including whether (1) the weapon is needed in view of changing world conditions, (2) it is affordable, and (3) the technical risks of modifying ACMs are acceptable.

ISSUES TO BE ADDRESSED IN CONSIDERING AN ACM VARIANT

The ACM variant program as proposed by OUSD/P would be significantly different from the previously terminated variant program in terms of cost, schedule, and risks. If serious consideration were to be given to such a proposal, the following issues would have to be closely examined.

Is the ACM Variant Still Needed?

Although SAC established, and has reaffirmed a requirement for the ACM variant, significant changes are occurring in the former Soviet Union and Eastern Europe. These events prompted dramatic reductions in U.S. nuclear weapons inventories and development programs. Changes in the world and the priorities assigned to the ACM variant were specifically noted by the House Committee on Appropriations in the decision to terminate the program. A Joint Requirements Operational Capability review was underway in the fall of 1991 but was stopped when the Air Force terminated the program. Such a review would be needed to evaluate the need for and potential effectiveness of the ACM variant in changing world conditions.

Is the ACM Variant Affordable?

Due to recent changes in the scope of the baseline ACM program, the cost of an ACM variant would be much higher than under the original ACM variant program. As originally planned, the cost of variant development and production was expected to be kept relatively low because of the parallel ACM program. For example, production plans called for quantities of both versions to be produced on the same line during the last 3 years of production.

However, with variant program termination in November 1991 and an April 1992 decision by Defense to end baseline production sooner than planned, the linkage to the ACM program and the expected lower cost of a parallel effort have been largely lost. In 1989, the Air Force estimated development of the variant would cost \$99.6 million, and production units would cost about the same as baseline ACMs. In March 1992, the Air Force estimated restarting and completing variant development would cost about \$245 million in addition to the \$60 million already spent. The Air Force estimated that modification costs alone would be about \$340 million. The Air Force preliminary cost analysis did not place a value on the 120 baseline missiles that would be taken from inventory for modification, or include costs associated with the classified nature of the variant.

Restarting the variant program would require establishing new contractor and Air Force teams to resume development and testing. The government teams for test support and contractor teams for avionics verification testing and

aircraft integration have been disbanded. In addition, test equipment has been transferred to other activities. For example, the test facility and test aircraft are no longer available for variant testing. Also, vendors and subcontractors have shut down their production lines.

Are the Technical Risks Acceptable?

Modifying existing ACMs to the variant configuration using manufacturing drawings is a significantly different effort than producing new variant missiles. While many of the costly electronic and mechanical components can be reused, much of the modified missile's structure must be newly fabricated. The structural differences require near total disassembly of an ACM and reassembly with new or refurbished parts to create a variant. This will require removal of thousands of rivets and breaking of numerous seals. As a result, new bulkheads and exterior metal skins will need to be manufactured and installed to ensure leak-proof seals. Other body assemblies are vulnerable to damage during disassembly and may need to be replaced.

The ACM program manager told us such an effort is unusual and would involve significant risk. He indicated reservations about the proposal to develop and test the variant and to maintain the ability to modify ACMs years later from detailed manufacturing drawings. Making modifications based on detailed drawings, he told us, does not provide any assurance that suppliers will remain available or that critical processes can be duplicated without problems.

SCOPE AND METHODOLOGY

We began work in August 1991 to examine issues related to both the baseline ACM and ACM variant. We issued a report on the baseline ACM on May 6, 1992. In February 1992, we became aware of OUSD/P's renewed interest in the variant and decided to examine the status of the variant program.

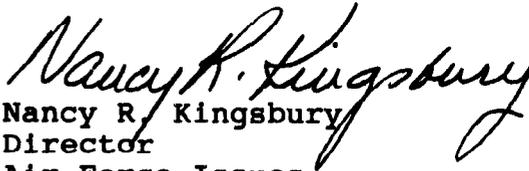
To obtain information on the variant program, we reviewed documents and interviewed officials at the ACM system program office, Wright-Patterson Air Force Base, Ohio; the Departments of Defense and the Air Force, Washington, D.C.; and the Strategic Air Command, Offutt Air Force Base, Nebraska. We performed our review of this issue from February to June 1992 in accordance with generally accepted government auditing standards.

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Copies of this letter are being sent to the Chairmen,
House and Senate Committees on Armed Services.

Please contact me at (202) 275-4268 if you or your staff
have any questions concerning this letter.


Nancy R. Kingsbury
Director
Air Force Issues

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